

letter to the editor

Comment on suspicious for malignancy cytology: nuclear characteristics deserve special attention in reported cytology analysis – real-world scenario cohort in thyroidology

Ilker Sengul^{1,2,3}

<https://orcid.org/0000-0001-5217-0755>

Demet Sengul⁴

<https://orcid.org/0000-0002-0416-0621>

¹ Thyroidology Unit, Giresun University Faculty of Medicine, Giresun, Turkey

² Division of Endocrine Surgery, Giresun University Faculty of Medicine, Giresun, Turkey

³ Department of General Surgery, Giresun University Faculty of Medicine, Giresun, Turkey

⁴ Department of Pathology, Giresun University Faculty of Medicine, Giresun, Turkey

Dear Editor,

We write in response to the recently published manuscript, “In suspicious for malignancy thyroid nodule aspirates, nuclei characteristics deserve special attention in reported cytology analysis – real world scenario cohort”, published in volume 69, Arch Endocrinol Metab (1). This diligent retrospective review of 289 nodules with suspicious for malignancy (SFM) cytology, though present findings offer important findings for those involved in thyroid cytopathology, certain aspects invite further discussion. The dedication to identifying diagnostic criteria within the SFM category, especially those that may serve in order of filtering out the rare instances of false positivity, is truly commendable in thyroidology. The most striking revelation of this valued Brazilian study is that the presence of micronucleoli and/or irregular or oval nuclei was the characteristic most strongly associated with malignancy. Indeed, the presence of micronucleoli alone was highly predictive, as shown by de Macedo and colleagues (1), increasing the chance of malignancy nearly thirteenfold.

This finding suggests that these features, when present, may warrant classifying a specimen as malignant rather than merely SFM. Interestingly, features traditionally emphasized in the literature – such as nuclear grooves and pseudoinclusions, which appeared with great frequency in the reports – did not significantly predict malignancy in this particular cohort. Notably, these established criteria were present in specimens proven to be malignant, as well as in those histologically confirmed as benign, thereby rendering them statistically irrelevant in differentiating true malignancy in this series. Nevertheless, while the reported risk of malignancy (ROM) of 98% in this Brazilian cohort surpasses the 74% mean ROM cited by the latest Bethesda System for Reporting Thyroid Cytopathology (TBSRTC), one must consider the methodology carefully (1).

The authors stated their outcome of category I, TBSRTC, was 20%; howbeit, would that or other possible desinence(s) alter if finer ones had been utilized? (2-7) The provider performing the fine-needle aspiration biopsies was a referral specialist of long standing, whose skill may perchance have introduced a selection bias, favoring the high ROM calculated. Howbeit, the analysis was conducted merely upon the cytopathological reports reviewed, rather than a direct examination of the slides themselves. Even though the authors demonstrate that the qualitative nature of the analysis still yielded valuable insights, it limits the ability to perform quantitative assessments that might truly clarify which set of criteria, and how many,

Received on Oct/4/2025
Accepted on Oct/7/2025

DOI: 10.20945/2359-4292-2026-0002

Correspondence to:

Ilker Sengul
ilker.sengul.52@gmail.com

Editor in chief:

César Boguszewski
<https://orcid.org/0000-0001-7285-7941>



This is an open-access article distributed under the terms of the Creative Commons Attribution License

must minimally be required to avoid diagnostic failure. Nonetheless, this rigorous analysis underscores the diagnostic importance of nuclear features — especially micronucleoli and nuclear irregularity — for practitioners aiming to maintain a high positive predictive value within the SFM category of TBSRTC. This issue merits further investigation. We thank de Macedo and cols. (1) for their high-toned research in SM cytology in Arch Endocrinol Metab, for thyroidologists.

Funding: none.

Disclosure: no potential conflict of interest relevant to this article was reported.

Data availability: datasets related to this article will be available upon request to the corresponding author.

REFERENCES

1. Macedo FC, Delfim RLC, Vaisman F. In suspicious for malignancy thyroid nodule aspirates, nuclei characteristics deserves special attention in reported cytology analysis - real world scenario cohort. Arch Endocrinol Metab. 2025;69(5):e240481. doi: 10.20945/2359-4292-2024-0481.
2. Sengul I, Sengul D. Delicate needle with the finest gauge for a butterfly gland, the thyroid: Is it worth mentioning? Sanamed. 2021;16(2):173-4. doi: 10.24125/sanamed.v16i2.515.
3. Sengul I, Sengul D. Apropos of quality for fine-needle aspiration cytology of thyroid nodules with 22-, 23-, 25-, even 27-gauge needles and indeterminate cytology in thyroidology: an aide memory. Rev Assoc Med Bras. 2022;68(8):987-8. doi: 10.1590/1806-9282.20220498.
4. Sengul D, Sengul I. Reinterpretation on a comparison of cytological adequacy between 23- and 25-gauge in thyroidology: Smaller needle gauges "ratio"nale or (over)use it? Rev Assoc Med Bras. 2024;70(11):e20240874. doi: 10.1590/1806-9282.20240874.
5. Sengul I, Sengul D, Veiga ECA. Revisiting optimal needle size for thyroid fine-needle aspiration cytology: Not much finer, less non-diagnostic? Rev Assoc Med Bras. 2021;67(9):1213-4. doi: 10.1590/1806-9282.20210671.
6. Sengul I, Sengul D. Big gain, no pain: Thyroid minimally invasive FNA (Thy MIFNA); Proposal of novelty in terminology. Rev Assoc Med Bras. 2021;67(12):1749-50. doi: 10.1590/1806-9282.20210922.
7. Sengul D, Sengul I. Minimum minimorum: thyroid minimally invasive FNA, less is more concept? Volens nolens? Rev Assoc Med Bras. 2022;68(3):275-6. doi: 10.1590/1806-9282.20211181.